



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

March 8, 1999

Ref: 8EPR-EP

Mr. Larry Shults
Bureau of Land Management
White River Resource Area
P.O. Box 928
Meeker, CO 81641

Re: DEIS Review - Rating EC-2
Yankee Gulch Sodium Minerals,
American Soda

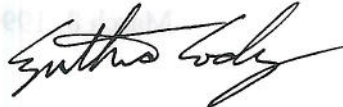
Dear Mr. Shults:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the Region VIII Office of the Environmental Protection Agency (EPA) has reviewed the *Draft Environmental Impact Statement (DEIS) for the Yankee Gulch Sodium Minerals Project, American Soda L.L.P.*, dated January 1999. The project includes nahcolite solution mining in the Piceance Creek Basin, two 44-mile pipelines for products and water, and the processing facility near Parachute. We offer the following concerns and comments for your consideration as you complete the Final Environmental Impact Statement (FEIS). The specifics of our concerns are in the attached detailed comments.

The primary concerns of EPA for this project are protecting soil and ground water, and ensuring that impacts are monitored and mitigated. Based on the procedures EPA uses to evaluate the potential effects of proposed actions and the adequacy of the information in the DEIS, the Preferred Alternative identified by the DEIS for the Yankee Gulch Project will be listed in the Federal Register in the category EC-2. This rating means that the review has identified environmental impacts that should be avoided in order to fully protect the environment, and the DEIS does not contain sufficient information to thoroughly assess environmental impacts that should be avoided to fully protect the environment. Attached is a summary of EPA's rating definitions.

We appreciate your interest in our comments. If you have any questions or want to discuss these comments, please contact Dana Allen at (303) 312-6870.

Sincerely,



Cynthia Cody
Chief, NEPA Unit
Office of Ecosystems Protection
and Remediation

Enclosure

cc: Elaine Suriano, EPA HQ
Hal Copeland, Steigers Corp.
Paul Osborne, EPA



**EPA Region VIII - Detailed Comments on
Draft Environmental Impact Statement
Yankee Gulch Sodium Minerals, American Soda L.L.P.
March 8, 1999**

1. The FEIS should explain that the proposed action, which is also the agency preferred alternative, has been modified through the mitigation and reclamation plans. Another option is to add an agency preferred alternative outlining the modifications to the proposed action.

Without this type of information, it is not clear how the proposed action and mitigations fit together. For example, on page 4-38, the small ponderosa pine community is identified as a high priority to preserve. On page 4-4, it appears that area will not be mined. However, it also appears that the plant community is still included in the area to be mined in the agency preferred alternative (Section 2.7).

2. The mitigation and reclamation plans should be included in the FEIS to disclose the complete project, including impacts and mitigations. Depending on the size of the documents, the FEIS should attach the plans or summarize and reference the plans.
3. Page 2-3, 4th paragraph, Well Field Layout: From the conflicting statements in this section, it is unclear how much vegetation will be removed at the Piceance site. One sentence implies that the well field will be cleared of timber, and scraped and graded. The next sentence states vegetation clearing will be minimized. Does this scraping and timber removal refer only to roads and well pads, instead of the entire well field?

Tables 4.7-1 and 4.7-2 do not clarify the situation since the total acres of the site were not included in the tables. Using the maps for the well fields it appears there are 1,030 acres of mining panels and Table 4.7-1 listed between 483 acres and 774 acres of possible disturbance in the well field. We suggest that more information be added describing how many acres of the mining panels will be: completely scraped, detimbered, and disturbed without vegetation removal.

4. Page 2-5, Section 2.2.1.1: Proper construction of the injection wells is one of the main methods to protect ground water. We recommend that this section be expanded to more fully describe well construction, including some basic design rationale. The issues listed below should be specifically addressed:
 - a. What are the rational for only setting surface casings to 120 feet? Is 120 feet deep enough? Is there a range for varying conditions?
 - b. The method for cementing the surface casing should be explained.
 - c. What is the anticipated drill hole sizes for the surface casing and the intermediate casing and what size and strength of casing does the company expect to use?
 - d. How is the cement going to be placed adjacent to the intermediate casing? The method used is not typical for most wells. The rationale (pros and cons) of using this method should be disclosed.

- e. How is the adequacy of the longstring cement going to be addressed? A cement bond log is needed to demonstrate adequate placement of cement. In addition EPA UIC regulations require either a temperature log or a Radioactive tracer survey to demonstrate that there is no flow adjacent to the casing.
5. We understand that the American Soda is evaluating the reinjection of brine wastes into previously mined panels to decrease waste stored in evaporation ponds and reduce the potential for subsidence. The FEIS should include this alternative.
6. Table 2-9, Sheet 3 of 12: In the section for "Increased level of NO_x and PM₁₀ in the Flat Tops Wilderness Area," please mention that under the proposed action, the Forest Service's threshold of 0.5 deciview impairment would be reached. Also, please list the predicted visibility impairment for the "Accelerated Development" alternative.
7. Page 2-12, Section 2.2.1.2 Petroleum Product Storage and Spill Prevention Control (SPCC) and Countermeasures. The FEIS should include analysis on storage of petroleum products on site either during construction or during operation. The storage of petroleum products including but not limited to gasoline, diesel, hydraulic fluid, oil refuse, and lubricating oil, is regulated under Clean Water Act Section 311 and as amended by the Oil Pollution Act of 1990. A spill prevention, control and countermeasures (SPCC) plan is required of a facility that at any one time stores over 660 gallons of petroleum product in a single container, or stores over 1320 gallons in multiple containers. Wheeled containers are included for the purposes of this regulation. The SPCC regulations are administered by EPA and have not been delegated to the states. The EPA contact for SPCC requirements in Martha Wolf (303)312-6839.
8. Spill prevention and countermeasures should also be developed for any hazardous materials planned for storage or use at this facility such as the materials listed in Table 2-5.
9. Page 2-16, Section 2.2.3.5: The experimental facility has a UIC Class I well associated with the Piceance Creek site. This well is used for waste brine disposal. Are there any plans to continue use of this type of well during the commercial phase?
10. Page 2-16, Section 2.2.5.3: The narrative indicates that only two monitoring wells will be used per panel. This does not seem sufficient given the size of the facility. EPA recommends a minimum of four well locations: one background, one midway in the panel and two at the down gradient edge of the panel. Several wells may be sited at each location (e.g., one alluvial well, one multi completion well for deeper zones).
11. Page 2-16, Section 2.2.5.3: The constituent list should include in-situ temperature measurements adjacent to the perforated interval.
12. Page 2-22, Section 2.2.5.4: Any overflows from the evaporation pond would also need to be reported to EPA and the State of Colorado. If the evaporation pond will occasionally overflow, for example in wet years, the proponent will need to obtain a surface water discharge permit (CPDES) from the State - CDPHE.

13. Page 2-25, Section 2.27: The FEIS should expand the explanation of how the project will be bonded to ensure that impacts will be mitigated through reclamation. Since there are several agencies that may be requiring bonding for reclamation, the FEIS should identify the areas that each agency will be bonding. EPA through the Underground Injection Control (UIC) permit will require bonding for closure of each injection well. EPA's bond only covers "in-hole" closure for injection wells. As we understand, BLM will require bonds for all surface reclamation, such as revegetation of well pads, equipment removal, demolition. BLM will also require bonding to close water monitoring and other "non-injection" wells.

We understand the State mining agency, Colorado Division of Minerals, is not planning to require a reclamation bond unless BLM and EPA were unable to obtain sufficient bonding for the project (as of Jan. 99).

14. About half of the pipeline and the entire Parachute site are on private lands. The FEIS should disclose how these areas will be reclaimed or decommissioned. Although these lands are not under the jurisdiction of the BLM, there could be significant impacts if the areas are not properly reclaimed. For example, will any of the bonds cover disturbances on private land? Are the requirements different for mitigation on the private land portion of the project?
15. Page 2-25, Section 2.2.7.1: This section only discusses the use of two plugs, one at the top and one at the bottom. This does not meet the Criteria in the UIC regulations (40 CFR146.10) which envisions isolating Underground Sources of Drinking Water (USDW). The wells should have an additional plug set across the base of the Uinta formation to isolate the most important USDW.
16. Page 2-29, Section 2.2.8: There appear to be several other reasonable foreseeable activities in the area. This section should be revised to include other activities. For example, could the other nahocolite mine expand. Also, oil and gas continues to develop in the area, such as the Navel Oil Shale Reserve as discussed in the new EIS for oil and gas for the Glenwood Springs management area. Coal bed methane development is also discussed on page 3-6 of the DEIS.
17. Page 2-23, Section 2.2.5.6: The FEIS should identify the salinity levels that present a risk for migratory birds. It would also be helpful to set a trigger level for netting the ponds at the start of the project. For example, what level of bird mortality will trigger additional mitigation?
18. The proponent may need ground water discharge permits, from the State - CDPHE for any unlined ponds.
19. The FEIS should disclose the measures that will be installed within the pipelines and processing sites to prevent contamination of the alluvial aquifers and surface waters from spills and runoff. See also comments 17, 18 and 24.

20. Page 3-17, Section 3.4.2.2: There is not sufficient discussion regarding the aquifers which underlie the proposed pipeline corridor. The FEIS should disclose the impacts of a spill on these alluvial aquifers. A map showing the alluvium present is needed to supplement an expanded narrative section. Information on water quality is also needed. It may be necessary to place a limited number of test holes to collect water quality data. Information regarding the existing use of alluvial and bedrock aquifers adjacent to the corridor should be described.
21. Page 3-21, Section 3.4.2.3: This section should provide specifics on the alluvial water quality at the sites, rather than relying on a range across the watershed. It is important to have background ground water data along the pipeline and especially at the process facilities. The process facilities are the most likely location for spills which may warrant cleanup.
22. Pages 4-4→4-9, Soils: It appears that soil erosion and sediment controls will be important to minimizing impacts from this project. The fragile soils at the Piceance site and the very steep slopes for the pipeline in several areas indicate that additional mitigation measures may be necessary. As discussed in the following comments, more information is needed on how the mitigation measures will be implemented. The reader is unable to determine which measures are likely to be implemented, the circumstances triggering mitigation measures and the level of reclamation that will be need to be achieved (reclamation goals).
23. Page 4-5 and Appendix A, Summary of American Soda's Current *Soil Conservation, Erosion and Sediment Control Plan*:
 - a. 2nd ●, Page 4-5: Will standard best management practices be sufficient for the project's fragile soils and steep slopes?
 - b. Appendix A lists many Best Management Practices (BMP). However, it is unclear how many of the BMP will be implemented at this project. Will all listed BMPs be implemented for all locations?
 - c. Appendix A should add BMP for the pipeline construction. The current table includes only the well field and facility area. Also it is unclear if the BMP for the Parachute Site are included in the facility area BMPs?
24. How will the erosion and sediment control measures be monitored and evaluated? If gullies occur or sediment is deposited downstream who monitors conditions, at what point are additional BMP's or corrective actions necessary?
25. Page 4-13, Section 4.41, 2nd paragraph; and page 5-4, Section 5.4: The discussions of impacts from water use are not consistent with the water depletion section on page 4-67. Sections 4.41 and 5.4 should be changed to explain the impacts of using the existing water rights in a 100% consumptive use. It appears that the existing water rights are either not currently being used or have a less consumptive use. The FEIS should explain how this depletion will affect flow and riparian/stream habitat in Parachute Creek?

26. Page 4-13, Section 4.4.2: There should be more discussion on the basis for the statement that breaches of the pipeline are unlikely. Are data on similar pipelines available to demonstrate the case for this statement.
27. Page 4-16, Section 4.4.3: The discussion does not indicate how pipeline problems would be detected and handled. This section should contain a contingency plan for addressing leaks along the pipeline. Are periodic inspections of the line planned? If so, how often? Will the line be segmented with manual or automatic shutoff valves? If a leak is detected, automatic valves would allow the pipeline to be closed at specific points above the leak to minimize the spill. If a spill does occur, will precipitation in the line be a problem? How would such a problem be handled? Could "in line" precipitation associated with either a leak or with normal operation jeopardize future continued utilization of the line?
28. Page 4-16, Section 4.4.3: More specific discussion is needed on the monitoring network to be installed at the two processing sites. Monitoring should focus on detecting impacts from seepage from the ponds/lagoons and spills in ground and surface waters. This should include the number of wells or stream stations, the criteria for locating them and the frequency of monitoring. Information is also needed on inventory procedure for detecting leaks and the frequency with which it will be employed. How will monitoring detect leakage from the ponds? The discussion indicates that installation of extraction wells would be a potential mitigation measure. Does this mean that there are other alternatives for eliminating problems associated with leaks and spills that should be disclosed in the FEIS. What are these alternatives? This section should also provide the criteria to be used in determining which alternative the operator would utilize to mitigate problems.
29. Page 4-21, Effects of Operation, first paragraph. Please quantify the amount of CO₂ that would likely be stripped from the mine water solution. Is this CO₂ a by-product of the mining operation? CO₂ has been recognized as a greenhouse gas that contributes to global warming, and therefore, CO₂ emissions are an international concern.
30. Page 4-26 and 4-27, PSD Class I and PSD Class II increments. EPA is pleased that a cumulative increment consumption was performed for the Class II increment. Normally, EPA would recommend that a cumulative increment consumption be performed for the Class I increment, since the public, the CDPHE, and the decision maker would benefit from the knowledge of what a cumulative Class I impact would be. However, the Glenwood Springs Final Supplemental EIS has included the American Soda processing facility as a "reasonably foreseeable future development" in their cumulative PSD Class I increment consumption analysis (see page 4-8 and 4-9). EPA supports this "regional air quality assessment" approach as a way of not only streamlining NEPA but also saving on the cost of performing air quality analyses.

Page 4-13, Section 4.2. There should be more discussion on the basis for the statement that boundaries of the pipeline are unlikely. Are data on similar pipelines available to demonstrate the case for this statement.

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